the information technology sector has accounted for nearly one-third of U.S. economic growth and has generated jobs that pay 85 percent more than the private sector average. The action I am taking today will help U.S. high-tech entrepreneurs compete and win in the global marketplace. It also will allow consumers to enjoy a wide range of new wireless tools and technologies, such as handheld devices that combine services like a phone, a computer, a pager, a radio, a customized newspaper, a GPS locator, and a credit card.

I am confident that Federal agencies, working with the private sector, can develop a plan for identifying the spectrum that will meet the needs of the wireless industry and is fully consistent with national security and public safety concerns. As made clear in a report released today by my Council of Economic Advisers, time is of the essence. If the United States does not move quickly to allocate this spectrum, there is a danger that the U.S. could lose market share in the industries of the 21st century. If we do this right, it will help ensure continued economic growth, the creation of new high-tech jobs, and the creation of exciting new Internet and telecommunications services.

Memorandum on Advanced Mobile Communications/Third Generation Wireless Systems

October 13, 2000

Memorandum for the Heads of Executive Departments and Agencies

Subject: Advanced Mobile Communications/ Third Generation Wireless Systems

The United States and the rest of the world are on the verge of a new generation of personal mobile communications, as wireless phones become portable high-speed Internet connections. The United States Government must move quickly and purposefully so that consumers, industry, and Government agencies all reap the benefits of this third generation of wireless products and services.

In less than 20 years, the U.S. wireless industry has blossomed from virtually nothing to one with 100 million subscribers, and it continues to grow at a rate of 25 to 30 percent annually. Globally, there are over 470 million wireless subscribers, a number expected to grow to approximately 1.3 billion within the next 5 years. It is an industry in which U.S. companies have developed the leading technologies for current and future systems. It is an industry whose products help people throughout the world communicate better and in more places, saving time, money, and lives.

Many saw the first generation of wireless—cell phones—as an extravagant way to make telephone calls. Yet as with all communications systems, the value of wireless communications increased as the number of users and types of use increased. Today's second generation wireless technology increased services and information offered to users and increased competition among providers. Digital "personal communications services" provide added messaging and data features, including such services as voice mail, call waiting, text messaging, and, increasingly, access to the World Wide Web. These first and second generation services increased productivity and reduced costs for thousands of businesses as well as Government agencies.

The next generation of wireless technology holds even greater promise. Neither the first nor the second generation of wireless technologies were designed for multi-media services, such as the Internet. Third generation wireless technologies will bring broadband to hand-held devices. Higher speeds and increased capability will lead to new audio, video, and other applications, which may create what many are calling "mobile-commerce" (m-commerce) that people will use in ways that are unimaginable today. Moreover, an international effort is underway to make it possible for the next generation of wireless phones to work anywhere in the world.

The Federal Government has always played a crucial role in the development of wireless services. To foster the development of cellular telephone service, the Federal Government made available radio frequency spectrum that

had previously been used by other commercial and Government services. For the second generation—digital PCS—the Federal Government allocated spectrum in bands occupied by private sector users, and ensured competition by awarding numerous licenses, while maintaining technology neutrality.

The United States has also placed a high value on promoting Internet access. Government support for the development of third generation wireless systems will help combine the wireless revolution with the Internet revolution. As part of these efforts, radio spectrum must be made available for this new use. The United States has already been active by, among other things, participating at the World Radiocommunication Conference 2000 (WRC–2000) earlier this year. WRC–2000 adopted the basic principles of the U.S. position, which was negotiated by Government and industry stakeholders: (1) governments may choose spectrum from any one or all of the bands identified for third generation mobile wireless; (2) governments have the flexibility to identify spectrum if and when they choose; and (3) no specific technology will be identified for third generation services. This result will allow deployment of the best technologies and permit the United States to move forward with rapid deployment of third generation services in a way that advances all U.S. interests.

The spectrum identified by international agreement at WRC–2000, however, is already being used in the United States by commercial telecommunications, television, national defense, law enforcement, air traffic control, and other services. Similar difficulties in making spectrum available for third generation mobile wireless systems are evident in other parts of the world. Because different regions have already selected different bands, there almost certainly will be a few preferred bands rather than a single band for third generation services.

In the United States, Federal Government agencies and the private sector must work together to determine what spectrum could be made available for third generation wireless systems.

Accordingly, I am hereby directing you, and strongly encouraging independent agencies, to be guided by the following principles in any future actions they take related to development of third generation wireless systems:

—Third generation wireless systems need radio frequency spectrum on which to operate. Executive departments and agencies and the Federal Communications Commission (FCC) must cooperate with industry to identify spectrum that can be used by third generation wireless systems, whether by reallocation, sharing, or evolution of existing systems, by July 2001;

—Incumbent users of spectrum identified for reallocation or sharing must be treated equitably, taking national security and public safety into account;

—The Federal Government must remain technology-neutral, not favoring one technology or system over another, in its spectrum allocation and licensing decisions;

—The Federal Government must support policies that encourage competition in services and that provide flexibility in spectrum allocations to encourage competition; and

—The Federal Government must support industry efforts as far as practicable and based on market demand and national considerations, including national security and international treaty obligations, to harmonize spectrum allocations regionally and internationally.

I also direct the relevant agencies as follows:

1. I direct the Secretary of Commerce to work cooperatively with the FCC, as the agencies within the Federal Government with shared responsibility and jurisdiction for management of the radio frequency spectrum, to develop, by October 20, 2000, a plan to select spectrum for third generation wireless systems, and to issue, by November 15, 2000, an interim report on the current spectrum uses and potential for reallocation or sharing of the bands identified at WRC–2000 that could be used for third generation wireless systems, in order that the FCC can identify, in coordination with the National Telecommunications and Information Administration, spectrum by July 2001, and auction licenses to competing applicants by September 30, 2002.

2. I also direct the Secretary of Commerce to work cooperatively with the FCC to lead a government-industry effort, through a series of regular public meetings or workshops, to work cooperatively with government and industry representatives, and others in the private sector, to develop recommendations and plans for identifying spectrum for third generation wireless systems consistent with the WRC–2000 agreements, which may be implemented by the Federal Government.

3. I direct the Secretaries of Defense, the Treasury, Transportation, and the heads of any other executive department or agency that is currently authorized to use spectrum identified at WRC–2000 for third generation wireless services, to participate and cooperate in the activities of the government-industry group.

4. I direct the Secretary of State to participate and cooperate in the activities of the government-industry group, and to coordinate and present the evolving views of the United States Government to foreign governments and international bodies.

Furthermore, I strongly encourage the FCC to participate in the government-industry outreach efforts and to initiate a rule-making proceeding to identify spectrum for third generation wireless services that will be coordinated with the Assistant Secretary of Commerce for Communications and Information during the formulation and decisionmaking process with the goal of completing that process by July 2001, so that such spectrum can be auctioned to competing applicants for licenses by September 30, 2002.

WILLIAM J. CLINTON

Memorandum on Preparing American Youth for 21st Century College and Careers

October 13, 2000

Memorandum for the Heads of Executive Departments and Agencies

Subject: Preparing American Youth for 21st Century College and Careers

Six years ago, I signed into law the School-to-Work Opportunities Act of 1994 to expand career and educational opportunities for our youth. A one-time Federal investment to jumpstart State and local education improvement and workforce development efforts, the initiative will end next October after helping raise the academic performance of millions of students.

States and schools have used School-to-Work resources to help students achieve high academic and industry-recognized occupational standards; encourage community and business involvement in our schools; and integrate technical and academic education. Through innovative learning strategies like strengthened curricula, work-based learning, internships, and career academies, School-to-Work has made learning more relevant to the challenges students will face after high school graduation.

Research shows that School-to-Work students take more challenging classes, earn higher grades, and are more likely to graduate from high school and enroll in college. In particular, School-to-Work programs such as career academies have improved the academic achievement of students who are most likely to drop out of school. School-to-Work helps students see the relevance of their studies for their futures, motivating them to attend classes and study hard, and has created thousands of new partnerships between businesses and schools.

But the need for highly skilled and educated workers has only grown in the past few years. Information Age jobs require more skills and knowledge, much of which was unknown only a decade ago. More than four-fifths of manufacturers use computers in design or manufacturing, and nine-tenths of them report difficulties in finding qualified job candidates. The number of jobs that require a college degree is growing twice as fast as the number of other jobs. In these strong economic times, the National Association of Manufacturers describes the shortage of skilled workers as "the only dark cloud hanging over our future."

As the School-to-Work legislation nears its conclusion, the Federal Government must prepare to continue its support of State and local efforts that prepare our youth for postsecondary education and careers. To build upon the lessons of School-to-Work program and coordinate the efforts of Federal programs to prepare youth for their futures, I hereby establish the National Task Force on Preparing Youth for 21st Century College and Careers. The Task Force will examine how a coordinated Federal policy can help all youth prepare for future careers in a rapidly changing, technologically driven economy.